



Modular Radar Demonstration & Development Platform



Overview

The iScan Radar Series makes rapid prototyping of high performance radar quick and easy. Utilizing a modular architecture, CEI's iScan processor, expansion and antenna modules can be mixed and matched to create a customized development platform. Equipped with extensive capability, such as MIMO, steerable beams and digital beam forming, iScan provides superior performance for tasks such as range, speed and RCS measurements, target tracking, collision avoidance, occupancy sensing and much more. iScan Antenna Modules are available in 24, 60 and 77GHz options, making the iScan Radar Series an excellent solution for your next application.

Modular and Expandable

CEI's iScan Modular Radar Architecture is designed to get your next radar prototype up and running quickly! The interchangeable antennas, processor and enhancement modules make it easy to customize your development platform. Sold as kits or as individual modules, simply choose your preferred combination of iScan modules, connect them together and get started!

Three basic types of boards comprise the iScan architecture:

- Processor Module, or iScan P, acts as the control center for the development platform.
- The optional Expansion Module (optional), or iScan E, can be added to provide enhanced processing, sensing, and evaluation capability.
- Antenna Module, or iScan A, includes the RF transmitter/receiver and a variety of antenna options.

All three module types are designed to be combined so feel free to mix, match and stack!

Custom Solutions Available!

Contact

Sales@ColoradoEngineering.com

CEI Is Proud To Be A Preferred Design Partner For:



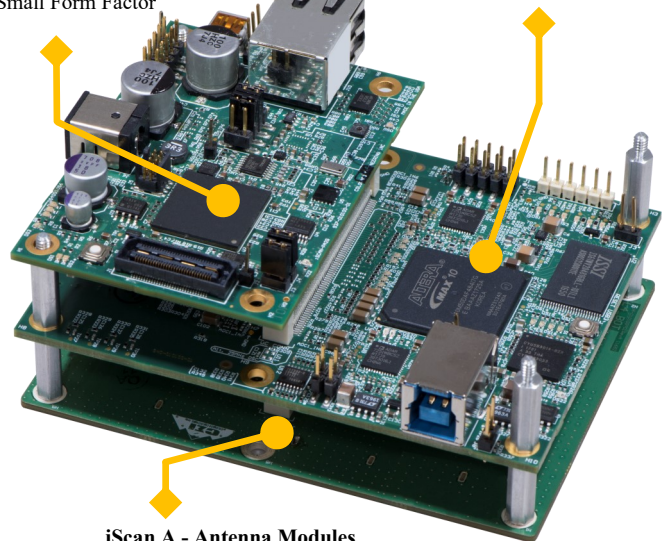
COMPONENTS

iScan P - Processor Module

- State-of-the-art Radar Processor Options
- I/O: Ethernet, USB, CAN, WiFi, Bluetooth & More!
- On-board Memory
- Small Form Factor

iScan E - Expansion Module

- Extend Processing Capability with FPGAs, GPUs and ASICs
- I/O Expansion
- Data Recording
- Low-Cost/Customizable Options



iScan A - Antenna Modules

- 24GHz, 60GHz, 77GHz
- RF Transmitter/Receiver
- Multiple Antenna Modules to Choose From

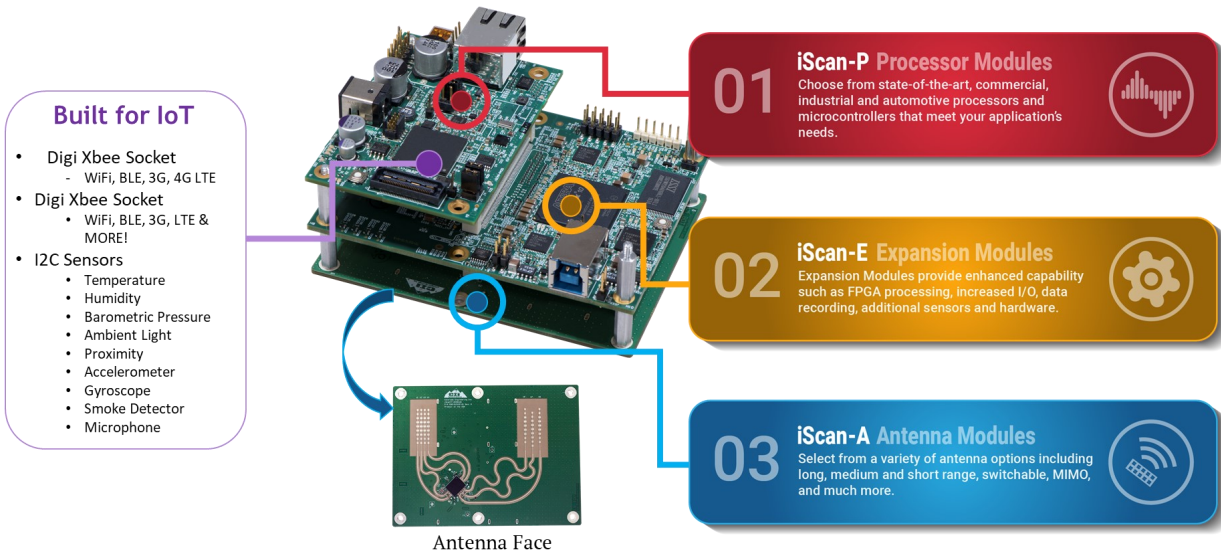
FEATURES

- High Performance Radar Capabilities
- Spatial Measurements
- Small Form Factor
- Multi-modal Sensor Configurations
- Multiple Beam Options
- Advanced Digital Signal Processing
- 24/60/77 GHz Frequencies

APPLICATIONS

- Smart City, Home & Security
- Aviation & Guidance
- Detection & Search
- Target Acquisition & Tracking
- Speed, Range & Angle Measurements
- Collision Avoidance & Assisted Driving & More!

MODULAR ARCHITECTURE



iScan A - Antenna Modules

Current Modules

Model Number	Options
iScan-A-RXS8160-6610D	<ul style="list-style-type: none"> • Frequency: 77GHz • XCVR: Infineon 77GHz Chipset • FoV: ±33° AZ, ±5° EL
iScan-A-BGT24-9010M	<ul style="list-style-type: none"> • Frequency: 24GHz • XCVR: Infineon BGT24MTR11 (24GHz) • FoV: 3x ±30° AZ, ±5° EL (Switchable and Fixed Beam Solutions)
iScan-A-5901/5904-7316F	<ul style="list-style-type: none"> • Frequency: 24GHz • XCVR: ADI 5901TX / 5904RX • FoV: ±36.5° AZ, ±8° EL
iScan-A-TEF8102D	<ul style="list-style-type: none"> • Frequency: 77GHz • XCVR: NXP TEF 8102 FMCW • FoV: (7x4 Center) ±12° Az, ±5° El (7x3 Outer) ±18° Az, ±5° El

iScan E - Expansion Modules

Current Modules

Model Number	Configurations
iScan - EM10	<ul style="list-style-type: none"> • Processor: Intel Max 10 FPGA • I/O: USB 3.0 Type-A • Other: 4-ch ADC
iScan - ETK1 (In Development)	<ul style="list-style-type: none"> • Processor: NVIDIA Tegra K1 • Features: H.264, HDMI, 1 USB 2.0, USB 3.0, X4 PCIe Gen2, Onboard IMU and much more!

iScan Development Kits

Model Number	Configurations
iScan - K - A2G - RXS8160/M10	<ul style="list-style-type: none"> • Processor Module: Infineon Aurix™ TC39xx • Antenna Module: Infineon 77GHz Chipset • Expansion Module: Intel Max 10 FPGA (optional)
RDk-S32R274	<ul style="list-style-type: none"> • Processor Module: NXP S32R274 • Antenna Module: NXP TEF8102 FMCW XCVR

iScan P - Processor Modules

Current Modules

Model Number	Configurations
iScan - PA2G	<ul style="list-style-type: none"> • Processor: Aurix™ TC39xx • On-board Sensors: IMU, Temperature, Humidity, Pressure, Light, Optical, Smoke Detector
iScan - P4700	<ul style="list-style-type: none"> • Processor: Infineon XMC4700 • On-board Sensors: Temperature, Humidity, Barometric Pressure, Ambient Light/Proximity, Accelerometer, Gyroscope, Smoke Detection & Microphone • Digi Xbee Socket: WiFi, LTE, Bluetooth & More
iScan-P-S32R274	<ul style="list-style-type: none"> • Processor: NXP S32R274 • On-board Sensors: Temperature, IMU, Light/Proximity, Barometer, Humidity, Smoke, Microphone

